N. S. HILLYARD.

ELECTRIC FAN AIR SPREADER.

APPLICATION FILED JULY 27, 1908.

915,178. Patented Mar. 16, 1909.

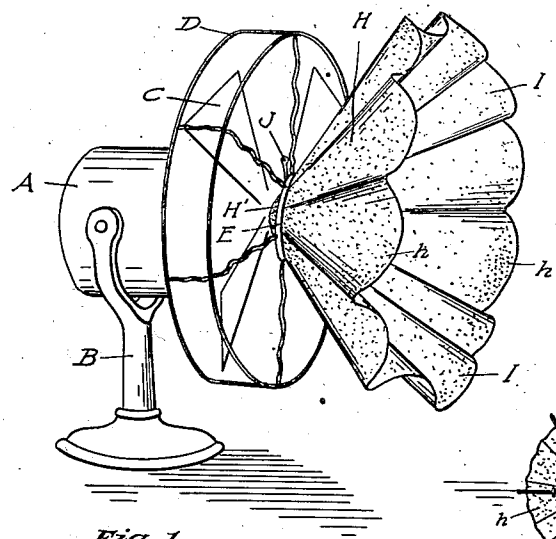


Fig. 1.

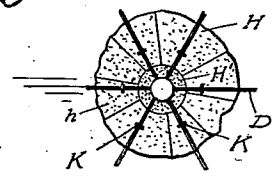


Fig. 4.

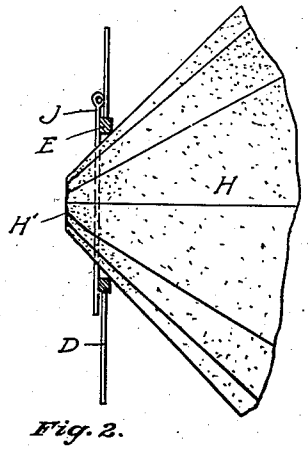


Fig. 2.

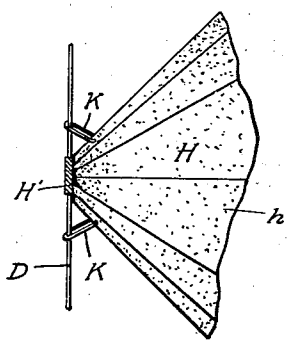


Fig. 3.

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ELECTRIC-FAN AIR-SPREADER.

No. 915,178. Specification of Letters Patent. Patented March 16, 1909.

Application filed July 27, 1908. Serial No. 445,599.

To all whom it may concern:

Be it known that I, NEWTON S. HILLYARD, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Electric-Fan Air-Spreaders, of which the following is a specification.

The object of my invention is to provide a device for attaching at the front of electric fans that will prevent the air being driven with so great force practically from the center out, only; that will spread and equalize this volume into the surrounding space as well as in the space forward of the fans, thus securing a better distribution of the air.

I accomplish my object by the mechanism illustrated in the accompanying drawings, in which,—

Figure 1 is a perspective of the device attached to the frame of an electric fan; Fig. 2 is a sectional elevation showing the manner of securing the device to the frame work of a fan; Fig. 3 is a sectional elevation showing the manner of securing the device to a modified construction of the frame of the fan and Fig. 4 is a rear elevation of Fig. 3.

Similar letters refer to similar parts in the several views.

In the drawings A is a case adapted to inclose an electric motor and B a support therefor.

C is a revoluble fan and D a protecting frame for said fan with a hub member E.

H is a conical shaped air spreader having perforations *h h* . . . which break the force of the breeze upon the persons or articles in line therewith, such as loose papers upon a desk which are often disarranged by the strength of the current of air. Said spreader consists of a single circular piece stamped from a metal sheet and bent into the shape mentioned. The body of the spreader consists of a plurality of furrows I I . . . narrow at the apex or small end H′ of the spreader and widening to the large open end, as shown in Figs. 1 and 2. These furrows are adapted to receive and carry air in partially separated currents, those which do not pass forward passing out through perforations *h h* . . . The air from the fans is thus distributed practically in all directions in an apartment or office, reaching the individual in proximity to the fans as well as others with a mild and refreshing force. Said small or apex end of the spreader is adapted to be fitted snugly within said hub member E and retained therein, as shown in Figs. 1 and 2, by a metal pin J inserted through perforations *h h* just back of and in contact with said hub member. The apex of said spreader being pressed flat and also provided with perforations *h h* . . . is adapted not only to frames with a hub member, as shown in Figs. 1 and 2, but also to frames in which the hub member is omitted and the frame wires extend to a common center, as shown in Fig. 3. When attached to the latter class of frames pins K K of the shape shown in Fig. 3 are preferably used, each engaging with a frame wire, the ends inserted through two of the perforations and twisted or knotted, thus holding the flattened end of the spreader rigidly against the converging wires of the frame. However, I do not wish to confine myself to either form of pin, but reserve the privilege to use any suitable means that is merely mechanical for attaching the device to any form of electric fan frame.

What I claim and desire to secure by Letters Patent, is:—

1. The combination with an electric fan and the frame thereof, of an air spreader its apex held in rigid engagement with the central part of the front of the frame, said apex being flattened and perforated, the body of said spreader consisting of ridges slightly spaced at the apex and diverging to the circumference of the spreader and incurves between said ridges widening from the apex to said circumference, said ridges and incurves being closely perforated and diverging a part of the air away from the front of the fan and the perforations dividing and reducing the force of the air passing forward of the fan through said perforations, substantially as set forth and shown.

2. An electric fan air spreader comprising a single piece of metal closely perforated bent into cone shape its apex flattened to adapt it to be fastened by means of pins to the front of a fan frame, the outside thereof having diverging sharply bent ridges with smooth corresponding incurves between said ridges widening from the apex to the outer circumference of the spreader, the outer surface of said ridges and incurves deflecting the air horizontally, vertically, and in all intermediate directions while the perforations and the interior surface of said ridges and incurves disperse the air gently to all points forward thereof, substantially as shown and described.

3. The combination with an electric fan and frame of an electric fan air spreader comprising a single sheet of closely perforated metal bent into cone shape the apex flattened adapting it to be attached to the central part of the front of the fan frame, ridges on the outer surface of the spreader diverging from said apex to the circumference and incurves forming valleys between said ridges narrow at their apex ends and widening thence to the circumference, substantially as shown and set forth.

In testimony whereof I affix my signature in presence of two witnesses.

NEWTON S. HILLYARD.

Witnesses:

JOSEPHINE E. DREYER,

JESSIE KELLY.